AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) An increment shifted transmission (9) for motor vehicles comprising an in-going shaft mounted in a housing (8), at least one intermediate shaft (11) arranged in the housing, which exhibits at least one gear wheel (16-17) in engagement with a gearwheel (12, 15) on the in-going shaft, a main shaft (10) arranged in the housing with gear wheels (15, 21, 22, 23) which engage gear wheels (18, 19, 20) on the intermediate shaft, with at least one of the gear wheels in each pair of mutually engaging gear wheels on the intermediate shaft and the main shaft being rotatably arranged about its shaft and being, by means of coupling members (13, 24, 25), lockable on its shaft, and with maneuvering members (40, 41, 42) which interact with the coupling members and are controlled by a control unit (45) depending on signals fed through the control unit representative of various engine and vehicle data wherein the maneuvering members (40, 41, 42) are arranged to, in the case of in-signals to the control unit (45) which indicate a predetermined driving condition at which the fuel consumption of the vehicle is optimally low, be set by means of the control unit (45) so that a synchronized gear which is engaged at the time is set in neutral position, and in that the maneuvering members ~~40, 41, 42~~ (40, 41, 42) are arranged to deactivate said neutral position when said driving condition is no longer present and wherein the control unit (45) is arranged to activate a free wheel function at at least one of the following driving conditions when driving with a predetermined speed (vset; vcc): i) the vehicle is considered to accelerate at an activated free wheel function, and retard without an activated free wheel function; ii) the vehicle is considered to maintain constant speed at an activated free wheel function and retard without an activated free wheel function, and iii) the vehicle is considered to retard at an activated free wheel function and retard without an activated free wheel function.

2. (Cancelled)

3. (Currently Amended) The gear box (9) as recited in ~~claim 2~~ claim 1, wherein the control unit (45) is arranged to not activate ~~the~~ a free wheel function in a driving situation in which the vehicle is considered to accelerate without an activated free wheel function.

4. (Original) The gear box (9) as recited in claim 1, wherein the control unit (45) is arranged to give an output signal to the maneuvering devices (40, 41, 42) to place said synchronized gear in the neutral position when the following conditions are fulfilled: i) a gear control (46) of the gear box (9) is in a position which corresponds to automatically controlled gear shifting, ii) an auxiliary brake arranged in the vehicle is arranged for automatic activation when needed, iii) the current gear of the gear box is within a pre-set upper interval, iv) a driver activated brake in the vehicle is not activated, v) the vehicle is rolling on essentially plane or slightly outwards sloping ground, and vi) a gas pedal arranged in the vehicle is not depressed.

5. (Currently Amended) The gear box (9) as recited in claim 4, wherein the control unit (45) is arranged to give an output signal to the maneuvering members (40, 41, 42) to move a gear which has been put into neutral out of neutral when at least one of the following conditions is fulfilled: i) said gear control (46) is not in a position which corresponds to automatically controlled gear shifting, ii) said auxiliary brake is not arranged for automatic activation, iii) said gear is outside of ~~the above mentioned~~ a predefined interval, iv) said driver activated brake is activated, v) said gas pedal is depressed, or vi) the engine has stopped or is in the process of stopping.

6. (Currently Amended) The gear box (9) as recited in claim 4 or 5, wherein said motor vehicle being arranged to be driven by means of an automatic cruise control, wherein the control unit (45) is arranged to give an output signal to the maneuvering members (40, 41, 42) to put said synchronized gear in the neutral position when the following conditions are met: i) a gear shifting member (46) of the gear box (9) is in a position which corresponds to automatically controlled gear shifting, ii) ~~an~~ the auxiliary brake of the vehicle is arranged for automatic activation as needed, iii) the current gear of the gear box is within ~~a~~ the pre-set upper interval of the gears of the gear box, iv) there is no request for auxiliary braking present, and v) there is no request for fuel which is considered to result in a delivered positive torque from the engine to the driving wheels of the vehicle.

7. (Currently Amended) The gear box (9) as recited in claim 6, wherein the control unit (45) is arranged to give output signals to the maneuvering members (40, 41, 42) to move ~~a~~ the gear which has been put into neutral out of neutral when at least one of the following conditions is met: i) said gear shifting (46) is not in ~~a~~ the position which corresponds to automatically controlled gear shifting, ii) said gear of the gear box is not within said upper interval, iii) there is a request for auxiliary braking, iv) there is a request for fuel which results in a positive torque from the engine to driving wheels of the vehicle, v) the gas pedal is depressed, or vi) the engine has stopped.

8. (Currently Amended) The gear box (9) as recited in claim ~~6 or 7~~, wherein the vehicle comprises an automatic auxiliary braking function which can be activated at a speed (vbc) which corresponds to ~~the~~ an actual speed of the vehicle exceeding a speed (vcc) which has been set by the cruise control by a certain maximum value with the control unit (45) being arranged to permit that said synchronized gear is put into neutral position when the speed of the vehicle is higher than the speed (vcc) set by the cruise control but at the same time lower than the speed (vbc) at which auxiliary braking takes place.

9. (Currently Amended) The gear box (9) as recited in any one of ~~the previous~~ claims 1-5, wherein the control unit (45) in case of a possible malfunction of said engine is arranged to: i) move ~~a~~ the gear which has been put into neutral position out of the neutral position and thus to deactivate a free wheel function, ii) decouple ~~the~~ a clutch (3) between said engine (1) and said gear box (9), iii) engage said gear, iv) engage the clutch (3) with the engine being allowed to be driven by the movement of the vehicle.

10. (New) The gear box (9) as recited in claim 6, wherein the control unit (45) in case of a possible malfunction of said engine is arranged to: i) move the gear which has been put into neutral position out of the neutral position and thus to deactivate a free wheel function, ii) decouple a clutch (3) between said engine (1) and said gear box (9), iii) engage said gear, iv) engage the clutch (3) with the engine being allowed to be driven by the movement of the vehicle.

11. (New) The gear box (9) as recited in claim 7, wherein the control unit (45) in case of a possible malfunction of said engine is arranged to: i) move the gear which has been put into neutral position out of the neutral position and thus to deactivate a free wheel function, ii) decouple a clutch (3) between said engine (1) and said gear box (9), iii) engage said gear, iv) engage the clutch (3) with the engine being allowed to be driven by the movement of the vehicle.

12. (New) The gear box (9) as recited in claim 8, wherein the control unit (45) in case of a possible malfunction of said engine is arranged to: i) move the gear which has been put into neutral position out of the neutral position and thus to deactivate a free wheel function, ii) decouple a clutch (3) between said engine (1) and said gear box (9), iii) engage said gear, iv) engage the clutch (3) with the engine being allowed to be driven by the movement of the vehicle.